

Portland: BEST in the West

Portland has blazed a trail in the west promoting energy efficiency in schools through its Rebuild America community partnership—Portland Partners for Energy Efficiency (P₂E₂). Through their Green Building Initiative (GBI) and promotion of green-energy generation, Portland has become the best in the west in building a reputation for successfully balancing community development and environmental stewardship.

Green Building Initiative

The City of Portland's GBI is an integrated, conservation-based effort to promote non-polluting, resource-efficient building and sustainable practices throughout the City. GBI sets aggressive goals and recommends a carefully selected set of strategies to leverage local expertise to develop cost-effective solutions.

One Portland public relations firm has reaped significant benefits from GBI. As part of the Initiative, the owners of Wieden + Kennedy worked with Gerding/Edlen Development to renovate a former five-story cold storage warehouse in the Pearl District and turn it into high-end office and retail space. Wieden + Kennedy moved into the 185,000 square foot building in early 2000 and now are an integral part of a quickly redeveloping part of town. In the same year, the firm's headquarter building won the BEST Business Energy Efficiency Award.

BEST, also referred to as Businesses for an Environmentally Sustainable Tomorrow is an integrated City program, offering the services of the Water Bureau, Energy Office, the Bureau of Environmental Services, and the Office of Transportation. The program rewards businesses who use resources wisely and save money through environmental innovation.



The award-winning Wieden + Kennedy building was formerly a vacant storage warehouse. This renovated building is a model of energy efficiency and an integral part of a redevelopment effort of Portland.

In addition to saving a historic building, the project featured sustainable design elements. Many of the former building's structural timbers were re-used for seating in the atrium that brings sunlight down through all five floors of the building. Over 100,000 board feet of lumber was either recycled back into the building or re-used elsewhere.

PARTNERSHIP FACTS:

- **Total Commercial Building Area Committed:**
52.2 million square feet
- **Total Energy Savings:**
663,408 MMBTU per year
- **Targeted Buildings:**
City of Portland Neighborhoods and Multnomah County Buildings
- **New and Notable Innovations:**
First digester/fuel cell hybrid system on the west coast that converts landfill gas into clean electricity

The building design gets significant daylighting through a five-story atrium that supplements an already-efficient, task-oriented lighting system. The lighting system uses only 84 percent of the lighting power density allowed by the Oregon Energy Code, which cuts the building's energy bill by about \$21,000 a year. The Wieden + Kennedy building owners will have lower tax bills too—they've received a 35 percent Business Energy Tax Credit to help offset additional costs for these energy-saving technologies.

The building's most innovative energy-saving feature may be its unique underfloor ventilation system. This system results in reduced fan energy, lower chiller load, more individual workspace temperature controls and improved air quality.

A West Coast First in Clean Energy Production

In 1999, the City of Portland entered into an agreement with Portland General Electric (PGE)—a Rebuild America Business Partner—to promote clean energy. The City Energy Challenge is PGE's program of energy-efficiency efforts and the umbrella for investing in and promoting innovative energy generation, including a hydrogen-based energy system—a fuel cell.

In July 2000, the City of Portland's Columbia Boulevard Wastewater Treatment Plant (CBWTP) began operations of the first publicly funded fuel

cell on the west coast. Portland's fuel cell converts anaerobic digester gas (60 percent methane gas) into electric power, reliably producing 175 kWh per hour—enough electricity to power 125 homes. This process works when methane gas is piped into the fuel cell then the cell extracts the hydrogen from

gas, combining hydrogen and oxygen from the air to create a chemical reaction that produces clean, reliable and renewable energy. Portland's fuel cell electrical output is about 1.4 million kilowatts per year.

PGE has supported the fuel cell project by giving

Portland's Environmental Services Department a rebate of \$247,000. Coupling energy efficiency with clean energy production seems to be a wise investment for the community. Dean Marriott, Director of Environmental Services, says "Energy efficiency projects we began undertaking in 1990 are now saving our Bureau and the City about \$615,000 per year. We used to flare off the gas that the fuel cell now converts to energy. That prevents 621 tons of carbon dioxide annually from being released into the air."

Wayne Lei, PhD., PGE's Director of Environmental Affairs, foresees a cleaner energy future in Portland. "Fuel cells and other small distributed sources of electricity are going to be much more common," Lei states. "It's a future we want to be prepared for and understand."

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— Wayne Lei, PGE's Director of Environmental Affairs

TO LEARN MORE ABOUT PORTLAND PARTNERS FOR ENERGY EFFICIENCY, CONTACT:

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